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Lake Okeechobee, Glades, Hendry, Martin, Okeechobee, and Palm Beach Counties, Florida

(U.S.) National Eutrophication Survey, Corvallis, OR

Prepared for

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NATIONAL EUTROPHICATION SURVEY

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16. ABSTRACT

Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivided according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

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REPORT

ON

LAKE OKEECHOBEE

GLADES, HENDRY, MARTIN, OKEECHOBEE,

AND PALM BEACH COUNTIES

FLORIDA

EPA REGION IV

WORKING PAPER No. 269

WITH THE COOPERATION OF THE

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

AND THE

FLORIDA NATIONAL GUARD

DECEMBER, 1977

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FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point-source discharge reduction and non-point source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's fresh water lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by EPA and to augment plans implementation by the states.

ACKNOWLEDGMENT

The staff of the National Eutrophication Survey (Office of Research & Development, U. S. Environmental Protection Agency) expresses sincere appreciation to the Florida Department of Environmental Regulation for professional involvement and to the Florida National Guard for conducting the tributary sampling phase of the Survey.

Joseph W. Landers, Jr., Secretary of the Department of Environmental Regulation; John A Redmond, former Director of the Division of Planning, Technical Assistance, and Grants; and Dr. Tim S. Stuart, Chief of the Bureau of Water Quality, provided invaluable lake documentation and counsel during the survey, reviewed the preliminary reports, and provided critiques most useful in the preparation of this Working Paper series.

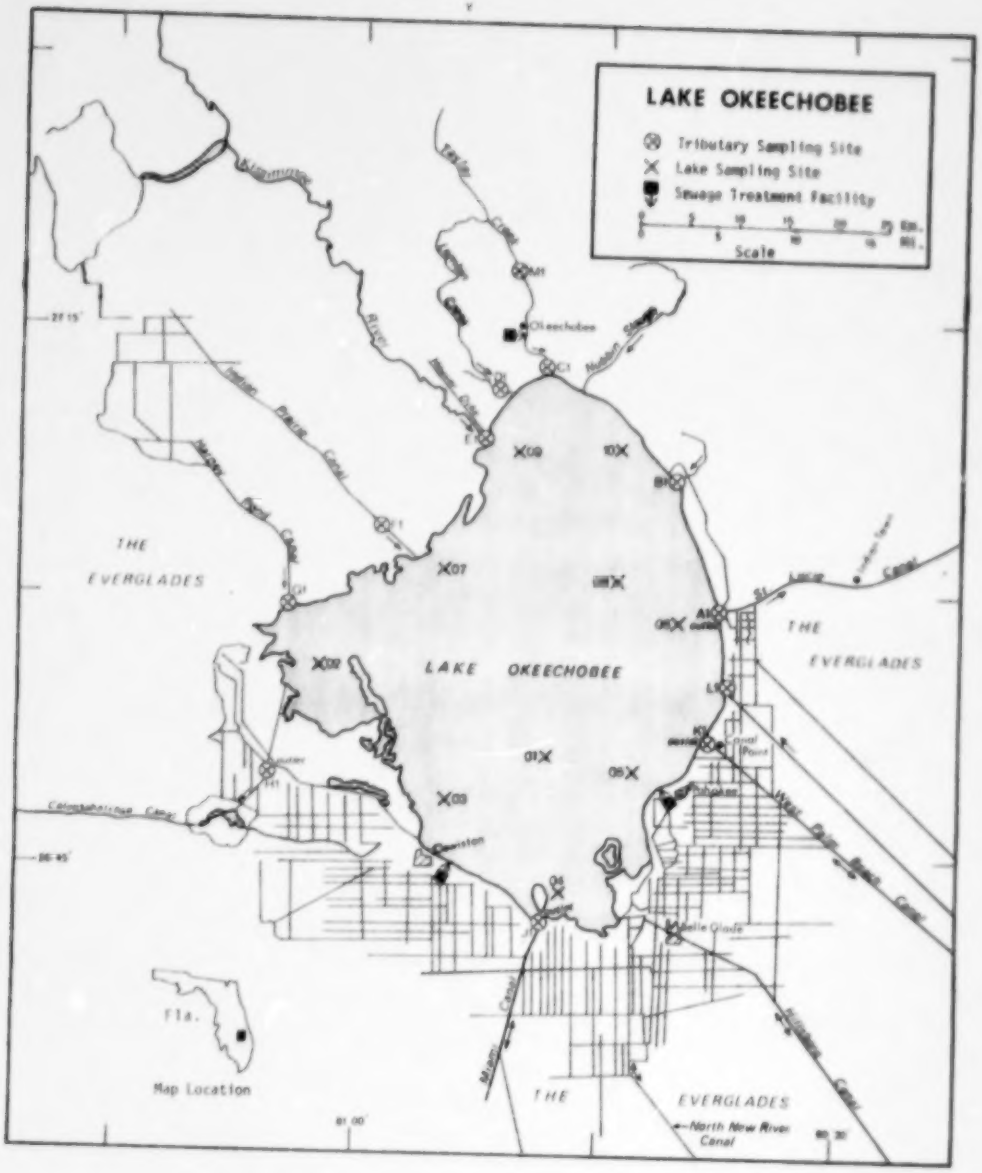
Major General Henry W. McMillan (Retired), then the Adjutant General of Florida, and Project Officer Colonel Hugo F. Windham, who directed the volunteer efforts of the Florida National Guard, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF FLORIDA

LAKE NAME	COUNTY
Alligator	Columbia
Apopka	Lake, Orange
Banana	Polk
Crescent	Flagler, Putnam
Doctors	Clay
Dora	Lake
East Tohopekaliga	Osceola
Effie	Polk
Eloise	Polk
George	Putnam, Volusia
Gibson	Polk
Glenada	Highlands
Griffin	Lake
Haines	Polk
Hancock	Polk
Horseshoe	Seminole
Howell	Orange, Seminole
Istokpoga	Highlands
Jessie	Polk
Jessup	Seminole
Kissimmee	Osceola
Lawne	Orange
Lulu	Polk
Marion	Polk
Minnehaha	Orange
Minneola	Lake
Monroe	Seminole, Volusia
Munson	Leon
Okeechobee	Glades, Hendry, Martin, Okeechobee, Palm Beach
Poinsett	Brevard, Orange, Osceola
Reedy	Polk
Seminole	Jackson, FL; Decatur, Seminole, GA
Seminole	Pinellas
South	Brevard
Talquin	Gadsden, Leon
Tarpon	Pinellas
Thonotosassa	Hillsborough
Tohopekaliga	Osceola
Trout	Lake
Weohyakapka	Polk
Yale	Lake


LAKE OKEECHOBEE
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Scale
LAKE OKEECHOBEE
THE EVERGLADES
THE EVERGLADES
THE EVERGLADES
Okeechobee
Indian Prairie Canal
Harney Pond Canal
Taylor Creek
Lemkin Creek
Kissimmee River
Nubbin Slough
Industrial Canal
Lateral Canal
Canal Point
Pahokee
Belle Glade
Clewiston
Caloosahatchee Canal
West Palm Beach Canal
Miami Canal
Hillsboro Canal
North New River Canal
Fla.
Map Location
81°00'
80°30'
26°45'

LAKE OKEECHOBEE

STORET NO. 1232

I. INTRODUCTION

The Florida Department of Environmental Regulation has recently published a detailed report on investigations conducted in the Lake Okeechobee watershed by Department staff and contract investigators (McCaffrey et al., 1976). The reader is referred to this 600+ page report for an in-depth evaluation of the lake and its watershed.

II. CONCLUSIONS

A. Trophic Condition:

Survey data indicate Lake Okeechobee is eutrophic. It ranked thirteenth when the 41 Florida lakes sampled in 1973 were compared using a combination of six water quality parameters*. Twelve of the lakes had less and one had the same median total phosphorus, four had less median orthophosphorus, 23 had less median inorganic nitrogen, 11 had less mean chlorophyll *a*, and 24 had greater mean Secchi disc transparency.

Survey limnologists noted water hyacinths at some of the sampling stations and abundant emergent and submergent vegetation at others.

B. Rate-Limiting Nutrient:

The algal assay results indicate phosphorus limitation at the time the sample was collected (03/07/73). Generally, the lake data

---

* See Appendix A.

indicate phosphorus limitation in March and nitrogen limitation in September and November.

C. Nutrient Controllability:

1. Point sources--It is estimated that point sources contributed 2.5% of the total load reaching the lake during the year. It appears that phosphorus control at the point sources would have minimal effect on the water quality of the lake because of the preponderance of the total phosphorus load contributed by other sources (see discussion below).

2. Non-point sources--The phosphorus loading from non-point sources is estimated to have been 97.5% of the total load reaching the lake. The Kissimmee River had the largest load of any of the sampled tributaries. However, this river basin is impacted by point sources in its northern reaches (i.e., Shingle Creek), and effects of the point sources are reflected in high pollutional loads (Federico and Brezonik, 1975).

The other gaged tributaries - Taylor Creek, Harney Pond Canal, Unnamed Creek B-1, Indian Prairie Canal, Limbin Creek, and Unnamed Canal L-1 - were estimated to have contributed 11.0%, 7.5%, 5.8%, 2.1%, 1.6%, and 1.0%, respectively. Most of the nutrient loads in these drainage areas are non-point kinds, including dairy farms (Taylor Creek) and cattle grazing (Baldwin, 1975). Baldwin (op. cit.) also indicated that significant amounts of nutrients are contributed by sugar cane and vegetable farming activities south and

southeast of the lake. The importance and effect of these nutrients on the water quality of Lake Okeechobee is reported by Brezonik and Federico (1975).

The ungaged drainage areas, including Nubbin Slough and the North New River and Hillsboro canals, were estimated to have contributed over 28% of the total phosphorus load reaching the lake. The Nubbin Slough area apparently has much dairy-farm activity; and, along with the Kissimmee River, appears to be the most significant source of phosphorus. The North New River and Hillsboro canals and the other irrigation canals are important sources of nutrients when they are back-pumped (Brezonik and Federico, op. cit.).

Because of the low proportion of direct point-source phosphorus contributions, effective control of nutrients will involve the agricultural activities in the Kissimmee-Okeechobee watershed, including dairy farms, grazing, and vegetable farming (Baldwin, op. cit.). Also, nutrient loads in the Kissimmee River basin could be reduced by control of point-source contributions in the Shingle Creek basin (Federico and Brezonik, op. cit.).

III. LAKE AND DRAINAGE BASIN CHARACTERISTICS†

A. Lake Morphometry††:

1. Surface area: 1,890.71 kilometers^2.
2. Mean depth: 2.8 meters.
3. Maximum depth: 4.7 meters.
4. Volume: 5,293.988 x 10^6 m^3.
5. Mean hydraulic retention time: 3.4 years (based on outflow).

B. Tributary and Outlet:
(See Appendix C for flow data)

1. Tributaries -

Name	Drainage area (km^2)*	Mean flow (m^3/sec)**
Kissimmee River	?	39.68
Harney Pond Canal	?	5.96
Taylor Creek	?	2.87
Indian Prairie Canal	?	1.52
Miami Canal	?	1.15
Limbin Creek	?	1.01
Unnamed Creek B-1	?	0.73
Unnamed Canal L-1	?	0.29
Totals	?	53.21

2. Outlets -

Caloosahatchee Canal	?	24.75
Okeechobee Waterway (St. Lucie Canal)	?	19.61
West Palm Beach Canal	?	4.62
Totals	13,007***	48.98***

C. Precipitation***:

1. Year of sampling: 122.7 centimeters.
2. Mean annual: 149.0 centimeters.

† Table of metric conversions--Appendix B.
†† Brezonik and Federico, 1975.

* See page 11.
** For limits of accuracy, See Working Paper No. 175, "... Survey Methods 1973-1976", and Brezonik and Federico, 1975.
*** Includes area of lake; total outflow affected by back pumping (see page 11).
**** See Working Paper No. 175.

IV. LAKE WATER QUALITY SUMMARY

Lake Okeechobee was sampled three times during 1973 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from one or more depths at ten stations on the lake (see map, page v). During each visit, a single depth-integrated (near bottom to surface) sample was composited from the stations for phytoplankton identification and enumeration; and during the first visit, a single 18.9-liter depth-integrated sample was composited for algal assays. Also each time, a depth-integrated sample was collected from each of the stations for chlorophyll a analysis. The maximum depths sampled were 3.0 meters at station 1, 1.2 meters at station 2, 0.9 meters at station 3, near-surface at station 4, 3.0 meters at station 5, 1.8 meters at station 6, 1.8 meters at station 7, 1.2 meters at station 8, 1.5 meters at station 9, and 1.8 meters at station 10.

The sampling results are presented in full in Appendix D and are summarized in the following table.

A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR LAKE OKEECHOBEE
STORET CODE 1232

PARAMETER	1ST SAMPLING (3/ 7/73) 10 SITES RANGE	MEAN	MEDIAN	2ND SAMPLING (9/ 1/73) 10 SITES RANGE	MEAN	MEDIAN	3RD SAMPLING (11/ 6/73) 10 SITES RANGE	MEAN	MEDIAN
TEMP (C)	22.4 - 27.3	25.3	25.8	27.5 - 29.0	28.4	28.4	24.5 - 26.4	25.2	24.9
DISS OXY (MG/L)	7.7 - 10.3	8.4	8.5	5.2 - 7.8	6.8	6.8	6.8 - 9.6	7.8	7.9
CNDCTVY (MCROMO)	380. - 800.	624.	640.	230. - 1147.	651.	638.	301. - 740.	588.	643.
PH (STAND UNITS)	8.5 - 8.8	8.7	8.7	7.9 - 8.6	8.4	8.4	7.7 - 8.8	8.4	8.5
TOT ALK (MG/L)	96. - 154.	137.	142.	25. - 298.	136.	122.	53. - 150.	114.	124.
TOT P (MG/L)	0.022 - 0.078	0.053	0.053	0.021 - 0.201	0.076	0.068	0.030 - 0.096	0.070	0.072
ORTHO P (MG/L)	0.004 - 0.015	0.008	0.007	0.007 - 0.058	0.025	0.017	0.008 - 0.041	0.020	0.019
NO2+NO3 (MG/L)	0.030 - 0.190	0.115	0.120	0.060 - 0.940	0.227	0.125	0.020 - 0.250	0.095	0.040
AMMONIA (MG/L)	0.030 - 0.090	0.059	0.060	0.060 - 0.260	0.108	0.095	0.030 - 0.070	0.048	0.050
KJEL N (MG/L)	1.100 - 2.100	1.514	1.500	1.600 - 3.700	2.360	2.150	1.100 - 2.000	1.532	1.500
INORG N (MG/L)	0.060 - 0.240	0.174	0.200	0.120 - 1.000	0.335	0.260	0.060 - 0.310	0.144	0.100
TOTAL N (MG/L)	1.160 - 2.260	1.624	1.540	1.810 - 4.640	2.587	2.270	1.130 - 2.140	1.627	1.620
CHLRPYL A (UG/L)	3.1 - 16.8	10.3	11.2	6.1 - 41.3	17.4	13.2	10.4 - 25.2	15.4	14.3
SECCHI (METERS)	0.4 - 1.8	0.7	0.6	0.4 - 1.0	0.7	0.6	0.3 - 1.0	0.7	0.8

B. Biological Characteristics:

1. Phytoplankton -

Sampling Date	Dominant Genera	Algal Units per ml
03/07/73	1. Lyngbya sp.	828
	2. Merismopedia sp.	453
	3. Cryptomonas sp.	374
	4. Flagellates	335
	5. Oscillatoria sp.	217
	Other genera	1,104
	Total	3,311
09/01/73	1. Lyngbya sp.	23,486
	2. Fragilaria sp.	2,888
	3. Coscinodiscus sp.	2,310
	4. Oscillatoria sp.	1,155
	5. Microcystis sp.	1,155
	Other genera	933
	Total	31,927
11/06/73	1. Lyngbya sp.	6,545
	2. Microcystis sp.	3,208
	3. Flagellates	2,695
	4. Merismopedia sp.	2,310
	5. Pennate diatoms	1,796
	Other genera	6,158
	Total	22,712

2. Chlorophyll a -

Sampling Date	Station Number	Chlorophyll a (µg/l)
03/07/73	1	-
	2	11.2
	3	3.1
	4	5.3
	5	8.5
	6	16.8
	7	12.0
	8	13.6
	9	8.7
	10	13.2
09/01/73	1	16.2
	2	41.3
	3	8.1
	4	8.1
	5	30.5
	6	6.9
	7	26.3
	8	10.2
	9	6.1
	10	20.7
11/06/73	1	10.7
	2	25.2
	3	19.8
	4	14.2
	5	10.4
	6	20.2
	7	15.8
	8	14.5
	9	13.0
	10	10.6

C. Limiting Nutrient Study:

1. Autoclaved, filtered, and nutrient spiked -

(a). Stations 1, 2, 3, and 4; March 7 and 8, 1973 -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.007	0.209	0.1
0.050 P	0.057	0.209	6.5
0.050 P + 1.0 N	0.057	1.209	12.3
1.0 N	0.007	1.209	0.1

(b). Stations 5 and 6; March 9, 1973 -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.012	0.172	0.7
0.050 P	0.062	0.172	11.5
0.050 P + 1.0 N	0.062	1.172	14.1
1.0 N	0.012	1.172	1.0

(c). Stations 7, 8, 9, and 10; March 10, 1973 -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.008	0.172	0.2
0.050 P	0.058	0.172	5.2
0.050 P + 1.0 N	0.058	1.172	15.3
1.0 N	0.008	1.172	0.2

2. Discussion -

The control yields of the assay alga, Selenastrum capricornutum, indicate that the potential primary productivity of Lake Okeechobee was low to moderate at the times the samples were collected.

There was a significant increase in yield compared to that

of the control when only phosphorus was added but a lack of increase in yield when only nitrogen was added. These results indicate phosphorus limitation.

The mean inorganic nitrogen/orthophosphorus ratios indicate a temporal and spatial combination of limiting nutrients (see tabulation below; the indicated limiting nutrients are in parentheses). Generally, the lake was phosphorus limited in March (the ratio for site 4 is based on a single surface sample and may not be representative). The samples taken during September show a shift to nitrogen limitation, especially where large inflows were recorded (e.g., stations 8, 9, and 10).

Station	March	September	November
1	23/1 (P)	12/1 (N)	16/1 (P)
2	16/1 (P)	6/1 (N)	6/1 (N)
3	14/1 (P)	50/1 (P)	8/1 (N)
4	11/1 (N)	111/1 (P)	10/1 (N)
5	25/1 (P)	15/1 (P)	13/1 (N?)
6	38/1 (P)	5/1 (N)	8/1 (N)
7	19/1 (P)	24/1 (P)	4/1 (N)
8	29/1 (P)	11/1 (N)	5/1 (N)
9	23/1 (P)	15/1 (P)	3/1 (N)
10	28/1 (P)	5/1 (N)	2/1 (N)

V. NUTRIENT LOADINGS
(See Appendix E for data)

For the determination of nutrient loadings, the Florida National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page v). Sampling was begun in March, 1973, and was completed in February, 1974.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the Florida District Office of the U.S. Geological Survey for the tributary sites nearest the lake. The drainage areas of the tributaries listed on page 4, representing the sampling stations indicated on the map (page v), have been altered by channelization. The determination of areas is difficult because of the extensive lowlands and the characteristic low relief. The reader is referred to Joyner (1974) and Davis and Marshall (1975) for information regarding the delineation and characteristics of Lake Okeechobee drainage basins.

Surface water drainage from Lake Okeechobee is now controlled by several canals, of which St. Lucie, Caloosahatchee, and West Palm Beach are the most important. Other canals serve as both inflow and outflow channels by means of a closely regulated and complex series of dams, pumps, and levees (Brezonik and Federico, 1975). Other known outflow includes seepage along the southern lake boundary which is estimated to be between 0.62 and 1.42 m^3/sec (Meyer, 1971).

In this report, nutrient loads for sampled tributaries were

calculated using mean annual concentrations and mean annual flows. Nutrient loads for Nubbin Slough and the North New River and Hillsboro canals are those reported by Davis and Marshall (1975) and are included in the estimates for the minor tributaries and immediate drainage.

The incoming or outgoing nutrient loads of the Miami Canal (J-1), West Palm Beach Canal (K-1), and Unnamed Canal L-1 were estimated by using the mean nutrient concentrations and the mean monthly flow. The estimate shown is a result of the summation of each monthly load where a negative monthly flow represents flow into the lake and a positive flow represents flow out of the lake.

The Miami Canal acts as a phosphorus outflow and a nitrogen inflow because of its characteristic flow patterns and nutrient concentrations observed during the sampling year.

The operator of the Okeechobee wastewater treatment plant provided monthly effluent samples and corresponding flow data. The cities of Clewiston and Belle Glade did not participate, and nutrient loads were estimated at 1.134 kg P and 3.401 kg N/capita/year. The Belle Glade sewage treatment plant discharges into the Hillsboro Canal which is back pumped into Lake Okeechobee during approximately one-third of the year. Nutrient loads shown for Belle Glade are one-third of the total estimated.

A. Waste Sources:

1. Known municipal* -

Name	Pop. Served	Treatment	Mean Flow (m^3/d)	Receiving Water
Okeechobee	1,100	act. sludge	530.0	Taylor Creek
Clewiston	1,200	act. sludge	454.2**	Canal to Lake Okeechobee
Belle Glade	8,000	Secondary	3,028.0**	Hillsboro Canal

2. Known industrial - None

* Treatment plant questionnaires.
** Estimated at 0.3785 m^3/capita/day.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

Source	kg P/ yr	% of total
a. Tributaries (non-point load) -		
Kissimmee River	105,115	30.0
Harney Pond Canal	26,315	7.5
Taylor Creek	38,560	11.0
Indian Prairie Canal	7,190	2.1
Lembin Creek	5,640	1.6
Unnamed Creek B-1	20,235	5.8
Unnamed Canal L-1	3,420	1.0
b. Minor tributaries & immediate drainage (non-point load) -	98,630	28.1
c. Known municipal STP's -		
Okeechobee	1,895	0.5
Clewiston	1,360	0.4
Belle Glade	9,070	2.6
d. Septic tanks - Unknown	?	-
e. Known industrial - None	-	-
f. Direct precipitation* -	33,085	9.4
Total	350,515	100.0

2. Outputs -

Lake outlets -	Miami Canal**	2,800
	Caloosahatchee Canal	31,560
	Okeechobee Waterway (St. Lucie Canal)	132,960
	West Palm Beach Canal	24,640
	Total	191,960

3. Net annual P accumulation - 158,555 kg.

* See Working Paper No. 175.
** See page 12.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

Source	kg N/yr	% of total
a. Tributaries (non-point load) -		
Kissimmee River	2,740,455	36.6
Harney Pond Canal	331,740	4.4
Taylor Creek	196,570	2.6
Indian Prairie Canal	103,345	1.4
Miami Canal*	57,640	0.8
Lembin Creek	69,625	0.9
Unnamed Creek B-1	62,040	0.8
Unnamed Canal L-1	75,965	1.0
b. Minor tributaries & immediate drainage (non-point load) -	1,776,325	23.7
c. Known municipal STP's -		
Okeechobee	3,090	<0.1
Clewiston	4,080	0.1
Belle Glade	27,210	0.4
d. Septic tanks - Unknown	?	-
e. Known industrial - None	-	-
f. Direct precipitation** -	2,041,210	27.3
Total	7,489,295	100.0

2. Outputs -

Lake outlets -	Caloosahatchee Canal	1,839,675
	Okeechobee Waterway (St. Lucie Canal)	1,331,460
	West Palm Beach Canal	3,782,225
	Total	6,953,360

3. Net annual N accumulation - 535,935 kg.

* See page 12.
** See Working Paper No. 175.

D. Mean Nutrient Concentrations in Tributaries:

Tributary	Mean Total P Conc. (mg/l)	Mean Total N Conc. (mg/l)
Kissimmee River	0.084	2.190
Harney Pond Canal	0.140	1.765
Taylor Creek C-1	0.447	2.206
Indian Prairie Canal	0.150	2.256
Miami Canal	0.056	2.716
Lembin Creek	0.177	2.186
Caloosahatchee Canal	0.062	2.357
Okeechobee Waterway (St. Lucie Canal)	0.215	2.153
West Palm Beach Canal	0.206	2.665
Unnamed Creek B-1	0.788	2.695
Unnamed Canal L-1	0.189	2.798

E. Yearly Loads:

In the following table, the existing phosphorus loadings are compared to those proposed by Vollenweider (Vollenweider and Dillon, 1974). Note, however, that Florida lakes may assimilate phosphorus at a somewhat higher level than that suggested by Vollenweider (Shannon and Brezonik, 1972).

Essentially, Vollenweider's "dangerous" loading is one at which the receiving water would become eutrophic or remain eutrophic; his "permissible" loading is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic loading would be considered one between "dangerous" and "permissible".

Vollenweider's model may not be applicable to water bodies with short hydraulic retention times.

	Total Phosphorus		Total Nitrogen	
	Total	Accumulated	Total	Accumulated
grams/m^2/yr	0.19	0.08	4.0	0.3

Vollenweider phosphorus loadings ($g/m^2/yr$) based on mean depth and mean hydraulic retention time of Lake Okeechobee:

"Dangerous" (eutrophic loading)	0.18
"Permissible" (oligotrophic loading)	0.09

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VII. APPENDICES

APPENDIX A

LAKE RANKINGS

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG %	SOC- MEAN SEC	MEAN CHLORA	15- MIN. DO	MEDIAN DISS INORG P
1201	ALLIGATOR LAKE	0.620	0.260	474.000	87.733	13.100	0.240
1202	LAKE APOPKA	0.102	0.230	484.176	45.611	8.200	0.019
1203	LAKE BANANA	0.660	0.260	482.667	208.600	3.600	0.293
1206	LAKE CRESCENT	0.065	0.130	473.884	10.211	10.200	0.033
1207	DOCTORS LAKE	0.084	0.120	465.555	27.100	10.600	0.026
1208	LAKE DORA	0.102	0.240	482.884	54.978	7.400	0.022
1209	LAKE EFFIE	1.480	0.410	484.000	261.433	15.000	0.950
1210	LAKE GEORGE	0.129	0.165	464.398	35.000	11.000	0.063
1211	LAKE GIBSON	0.187	0.115	470.000	19.675	10.200	0.069
1212	GLENADA LAKE	0.134	0.165	454.167	27.667	14.700	0.072
1214	LAKE GRIFFIN	0.119	0.260	481.333	66.855	6.600	0.038
1215	LAKE HAINES	0.063	0.115	462.667	26.567	10.600	0.014
1217	LAKE HANCOCK	0.772	0.195	483.500	97.900	5.600	0.158
1219	LAKE HORSESHOE	0.034	0.130	457.000	12.067	11.500	0.023
1220	LAKE HOWELL	1.260	0.285	464.000	54.117	9.000	1.175
1221	LAKE ISTOKPOGA	0.034	0.120	464.222	6.594	8.600	0.010
1223	LAKE JESSUP	0.442	0.240	487.000	76.550	7.600	0.288
1224	LAKE KISSIMMEE	0.034	0.145	483.667	24.142	8.800	0.007
1227	LAKE LIRLU	1.490	1.065	483.000	276.566	14.300	1.030
1228	LAKE MARION	0.044	0.260	468.833	24.967	7.600	0.016
1229	LAKE MINNEHAHA	0.034	0.090	439.000	8.733	7.700	0.012
1230	LAKE MINNEOLA	0.018	0.070	406.333	3.333	7.400	0.004
1231	LAKE MONROE	0.148	0.300	474.555	14.225	10.800	0.124
1232	LAKE OREECHOBEE	0.063	0.185	472.366	14.524	9.800	0.010
1234	LAKE POINSETT	0.085	0.150	464.000	6.500	10.600	0.051
1236	LAKE REEDY	0.033	0.330	468.500	34.837	10.600	0.006
1238	LAKE SOUTH	0.074	0.130	464.000	23.167	9.000	0.026
1239	LAKE TALQUIN	0.083	0.290	462.167	9.483	14.400	0.031

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500- MEAN SEC	MEAN CHLORA	15- MIN DO	MEDIAN DISS ORTHO P
1240	LAKE THONOTOSASSA	0.[illegible]	0.095	466.167	37.700	10.200	0.565
1241	LAKE TOHOPEKALIGA	0.245	0.200	472.917	30.633	10.500	0.152
1242	TROUT LAKE	1.110	0.650	472.000	76.967	12.900	0.470
1243	LAKE WEOHYAKAPKA	0.047	0.080	458.667	7.767	8.200	0.011
1246	LAKE YALE	0.027	0.160	441.000	25.367	7.600	0.014
1247	LAKE MUNSON	1.475	0.425	486.667	140.317	12.200	0.852
1248	LAKE SEMINOLE	0.234	0.175	473.833	102.000	8.600	0.026
1249	LAKE LAWNE	2.560	1.350	494.667	84.900	10.400	0.117
1250	LAKE TARPON	0.041	0.070	400.889	6.867	9.000	0.027
1252	LAKE ELOISE	0.486	0.170	465.333	70.233	12.200	0.339
1256	LAKE JESSIE	0.051	0.090	452.667	26.300	10.800	0.011
1261	EAST LAKE TOHOPEKALIGA	0.042	0.070	440.833	5.167	9.400	0.007
1264	PAYNE'S PRAIRIE LAKE (NO	1.260	0.140	476.000	88.200	7.400	1.210

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PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500= MEAN SEC	MEAN CHLORA	19= MIN DO	MEDIAN DISS ORTHO P	INDEX NO
1201	ALLIGATOR LAKE	25 (10)	29 (10)	30 (12)	18 (7)	10 (4)	18 (7)	136
1202	LAKE APOPKA	50 (23)	38 (15)	10 (4)	38 (15)	70 (29)	70 (28)	280
1203	LAKE BANANA	23 (9)	29 (10)	20 (8)	5 (2)	100 (40)	23 (9)	200
1206	LAKE CRESCENT	65 (26)	70 (27)	33 (13)	80 (32)	48 (18)	50 (20)	346
1207	DOCTORS LAKE	60 (24)	76 (30)	60 (24)	55 (22)	34 (12)	56 (22)	341
1208	LAKE DORA	53 (21)	35 (14)	18 (7)	33 (13)	90 (35)	68 (27)	297
1209	LAKE EFFIE	5 (2)	13 (4)	3 (1)	3 (1)	0 (0)	10 (4)	31
1210	LAKE GEORGE	45 (18)	54 (21)	48 (19)	43 (17)	23 (9)	43 (17)	256
1211	LAKE GIBSON	40 (16)	81 (32)	45 (18)	70 (28)	48 (18)	40 (16)	324
1212	GLENADA LAKE	43 (17)	54 (21)	85 (34)	53 (21)	3 (1)	38 (15)	276
1214	LAKE GRIFFIN	48 (19)	29 (10)	23 (9)	30 (12)	95 (38)	48 (19)	273
1215	LAKE HAINES	70 (28)	81 (32)	75 (30)	58 (23)	34 (12)	78 (31)	346
1217	LAKE HANCOCK	18 (7)	43 (17)	13 (5)	13 (5)	98 (39)	28 (11)	213
1219	LAKE HORSESHOE	93 (37)	70 (27)	80 (32)	78 (31)	20 (8)	65 (26)	406
1220	LAKE HOWELL	11 (4)	23 (9)	69 (27)	35 (14)	60 (23)	3 (1)	201
1221	LAKE ISTOKPOGA	85 (34)	76 (30)	65 (26)	93 (37)	69 (27)	89 (35)	477
1223	LAKE JESSUP	28 (11)	18 (7)	5 (2)	25 (10)	83 (32)	25 (10)	194
1224	LAKE KISSIMMEE	90 (36)	63 (25)	73 (29)	65 (26)	65 (26)	99 (39)	455
1227	LAKE LULU	3 (1)	3 (1)	15 (6)	0 (0)	8 (3)	5 (2)	34
1228	LAKE MARION	78 (31)	29 (10)	53 (21)	50 (20)	83 (32)	73 (29)	366
1229	LAKE MINNEHAHA	88 (35)	91 (36)	95 (38)	85 (34)	78 (31)	80 (32)	517
1230	LAKE MINNEOLA	100 (40)	98 (39)	98 (39)	100 (40)	90 (35)	93 (37)	579
1231	LAKE MONROE	38 (15)	15 (6)	28 (11)	75 (30)	26 (10)	33 (13)	215
1232	LAKE OKEECHOBEE	68 (27)	45 (18)	40 (16)	73 (29)	53 (21)	89 (35)	368
1234	LAKE POINSETT	58 (23)	60 (24)	50 (20)	95 (38)	34 (12)	45 (18)	342
1235	LAKE REEDY	95 (38)	13 (5)	55 (22)	45 (18)	34 (12)	95 (38)	337
1238	LAKE SOUTH	63 (25)	70 (27)	69 (27)	68 (27)	60 (23)	58 (22)	388
1239	LAKE TALQUIN	55 (22)	20 (8)	78 (31)	83 (33)	5 (2)	53 (21)	294

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500= MEAN SEC	MEAN CHLORA	15= MIN DO	MEDIAN DISS ORTHO P	INDEX NO
1240	LAKE TWONOTOSASSA	20 (8)	85 (34)	58 (23)	40 (16)	48 (18)	15 (6)	265
1241	LAKE TOHOPEKALIGA	33 (13)	40 (16)	38 (15)	48 (19)	40 (16)	30 (12)	229
1242	TROUT LAKE	15 (6)	8 (3)	43 (17)	23 (9)	13 (5)	8 (3)	110
1243	LAKE WEOHYAKAPKA	75 (30)	91 (36)	83 (33)	88 (35)	74 (29)	84 (33)	495
1246	LAKE YALE	98 (39)	58 (23)	90 (36)	63 (25)	83 (32)	75 (30)	467
1247	LAKE MINSON	8 (3)	5 (2)	8 (3)	8 (3)	16 (6)	13 (5)	58
1248	LAKE SEMINOLE	35 (14)	48 (19)	35 (14)	10 (4)	69 (27)	63 (25)	280
1249	LAKE LAWNE	0 (0)	0 (0)	0 (0)	20 (8)	43 (17)	35 (14)	98
1250	LAKE TAHPUN	83 (33)	98 (38)	100 (40)	90 (36)	60 (23)	60 (24)	441
1252	LAKE ELOISE	30 (12)	50 (20)	63 (25)	28 (11)	18 (6)	20 (8)	207
1256	LAKE JESSIE	73 (29)	88 (35)	86 (33)	60 (24)	26 (10)	84 (33)	419
1261	EAST LAKE TOHOPEKALIGA	80 (32)	98 (38)	93 (37)	98 (39)	55 (22)	99 (39)	523
1264	PAYNES PRAIRIE LAKE (NO	11 (4)	65 (26)	25 (10)	15 (6)	90 (35)	0 (0)	206

LAKES RANKED BY INDEX NOS.

RANK	LAKE CODE	LAKE NAME	INDEX NO
1	1230	LAKE MINNEOLA	579
2	1261	EAST LAKE TOHOPEKALIGA	523
3	1229	LAKE MINNEHAHA	517
4	1243	LAKE WEOHYAKAPKA	495
5	1250	LAKE TARPON	491
6	1221	LAKE ISTOKPOGA	477
7	1246	LAKE YALE	467
8	1224	LAKE KISSIMMEE	455
9	1258	LAKE JESSIE	419
10	1219	LAKE HORSESHOE	406
11	1215	LAKE HAINES	395
12	1238	LAKE SOUTH	386
13	1232	LAKE OKEECHOBEE	368
14	1228	LAKE MARION	366
15	1206	LAKE CRESCENT	346
16	1234	LAKE POINSETT	342
17	1207	DOCTORS LAKE	341
18	1236	LAKE REEDY	337
19	1211	LAKE GIBSON	324
20	1208	LAKE DORA	297
21	1239	LAKE TALQUIN	294
22	1202	LAKE APOPKA	280
23	1212	GLENADA LAKE	276
24	1214	LAKE GRIFFIN	273
25	1240	LAKE THONOTOSASSA	266
26	1248	LAKE SEMINOLE	260
27	1210	LAKE GEORGE	256
28	1241	LAKE TOHOPEKALIGA	229

LAKES RANKED BY INDEX NOS.

RANK	LAKE CODE	LAKE NAME	INDEX NO
29	1231	LAKE MUNROE	215
30	1217	LAKE MANCOCK	213
31	1252	LAKE ELOISE	207
32	1264	PAYNE'S PRAIRIE LAKE (GU	206
33	1220	LAKE HOWELL	201
34	1203	LAKE BANANA	200
35	1223	LAKE JESSUP	194
36	1201	ALLIGATOR LAKE	130
37	1262	TROUT LAKE	110
38	1249	LAKE LAWNE	98
39	1267	LAKE MUNSON	58
40	1227	LAKE LULU	34
41	1209	LAKE EFFIE	31

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APPENDIX B

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX C

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR FLORIDA 05/28/76

LAKE CODE 1232 LAKE OKEECHOBEE

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 0.0

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS) JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1232A1	0.0	7.48	9.57	23.22	30.10	5.86	19.40	41.23	38.54	4.02	17.24	22.14	15.40	19.61
1232B1	0.0	0.368	0.311	0.623	0.085	0.368	1.557	1.416	1.444	1.133	0.850	0.396	0.170	0.729
1232D1	0.0	0.51	0.42	0.85	0.11	0.51	2.15	1.95	2.01	1.56	1.19	0.54	0.23	1.01
1232E1	0.0	31.23	37.01	52.44	37.07	21.58	33.16	42.08	45.70	53.09	74.36	26.56	21.29	39.68
1232F1	0.0	0.59	0.57	1.27	0.17	0.42	3.06	3.06	2.97	3.20	2.35	0.37	0.14	1.52
1232G1	0.0	3.62	4.47	8.69	2.04	1.73	9.80	8.78	8.10	9.77	10.02	3.37	0.99	5.96
1232H1	0.0	19.57	14.67	27.92	48.25	18.12	32.56	33.47	37.38	8.21	20.90	21.01	14.27	24.75
1232J1	0.0	4.191	5.380	7.419	13.592	8.014	-7.589	-6.938	-4.899	-5.805	-4.191	1.841	3.115	1.150
1232K1	0.0	5.465	3.766	6.994	12.176	9.571	-0.623	0.538	3.115	1.416	2.464	3.908	6.513	4.620
1232L1	0.0	-1.557	-1.926	-0.113	-1.331	-0.481	5.239	-0.255	2.265	0.793	3.228	-0.765	-1.699	0.294
1232M1	0.0	1.44	1.16	2.44	0.31	1.39	6.30	5.49	5.58	4.30	4.08	1.50	0.62	2.87

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 0.0
SUM OF SUB-DRAINAGE AREAS = 0.0
TOTAL FLOW IN = 0.0
TOTAL FLOW OUT = 1223.59

NOTE *** SEE WRITE UP ON LAKE OKEECHOBEE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
1232**	3	73	21.946	17	26.618				
	4	73	58.078	13	60.881				
	5	73	67.224	17	60.372				
	6	73	26.873	15	41.258				
	7	73	4.870	13	7.221				
	8	73	4.276	21	1.841				
	9	73	5.097	12	6.513				
	10	73	17.613	13	5.975				
	11	73	64.591	16	80.533				
	12	73	28.034	15	12.205				
	1	74	10.392	20	7.872				
	2	74	36.161	15	46.525				
1232A1	3	73	1.841	17	1.926				
	4	73	4.955	13	6.145				
	5	73	2.124	17	6.768				
	6	73	-3.398	15	6.994				
	7	73	-10.562	13	7.079				
	8	73	-1.388	21	1.699				
	9	73	3.794	12	6.371				
	10	73	-0.057	13	5.833				
	11	73	5.040	16	5.154				
	12	73	2.945	15	4.644				
	1	74	3.200	20	4.559				
	2	74	4.757	15	5.012				

TRIBUTARY FLOW INFORMATION FOR FLORIDA 05/28/76

LAKE CODE 1232 LAKE OKEECHOBEE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
123281	3	73	0.198	17	0.085				
	4	73	0.113	13	0.113				
	5	73	0.028	17	0.028				
	6	73	0.085	15	0.028				
	7	73	0.793	13	0.453				
	8	73	3.228	21	2.294				
	9	73	1.076	12	0.793				
	10	73	0.481	13	1.048				
	11	73	0.085	16	0.057				
	12	73	0.028	15	0.028				
	1	74	0.028	20	0.028				
	2	74	0.0	15	0.0				
123201	3	73	0.255	17	0.113				
	4	73	0.142	13	0.142				
	5	73	0.028	17	0.057				
	6	73	0.142	15	0.028				
	7	73	1.104						
	8	73	4.502	21	3.200				
	9	73	1.472	12	1.076				
	10	73	0.680	13	1.472				
	11	73	0.085	16	0.085				
	12	73	0.057	15	0.028				
	1	74	0.057	20	0.028				
	2	74	0.0	15	0.0				
1232E1	3	73	54.680	17	47.289				
	4	73	99.817	13	176.980				
	5	73	60.881	17	106.188				
	6	73	16.509	15	0.0				
	7	73	37.180	13	18.406				
	8	73	75.833	21	85.234				
	9	73	118.563	12	195.103				
	10	73	34.263	13	7.419				
	11	73	4.049	16	4.616				
	12	73	1.926	15	1.727				
	1	74	2.010	20	0.085				
	2	74	23.871	15	51.253				
1232F1	3	73	0.0	17	0.0				
	4	73	0.057	13	0.0				
	5	73	0.0	17	0.0				
	6	73	0.283	15	0.0				
	7	73	3.256	13	0.0				
	8	73	0.963	21	0.0				
	9	73	3.766	12	9.854				
	10	73	1.897	13	3.002				
	11	73	0.0	16	0.0				
	12	73	0.057	15	0.0				
	1	74	0.0	20	0.0				
	2	74	0.0	15	0.0				

LAKE CODE 1232 LAKE OKEECHOBEE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
1232G1	3	73	1.076	17	0.0				
	4	73	0.481	13	0.0				
	5	73	1.671	17	0.368				
	6	73	3.256	15	0.0				
	7	73	13.819	13	4.729				
	8	73	8.835	21	0.651				
	9	73	24.891	12	30.582				
	10	73	15.263	13	32.564				
	11	73	1.444	16	0.0				
	12	73	1.303	15	0.0				
	1	74	0.142	20	0.0				
	2	74	0.0	15	0.0				
1232H1	3	73	1.388	17	2.095				
	4	73	4.361	13	4.672				
	5	73	5.578	17	0.142				
	6	73	2.322	15	0.142				
	7	73	0.142	13	0.142				
	8	73	0.142	21	0.142				
	9	73	0.142	12	0.142				
	10	73	0.821	13	0.142				
	11	73	3.087	16	12.374				
	12	73	2.294	15	4.446				
	1	74	1.897	20	0.142				
	2	74	5.295	15	6.654				
1232J1	3	73	0.651	17	2.662				
	4	73	8.297	13	7.249				
	5	73	18.689	17	21.153				
	6	73	13.252	15	24.154				
	7	73	-4.786	13	-2.577				
	8	73	-1.897	21	0.0				
	9	73	-1.019	12	0.0				
	10	73	1.954	13	0.0				
	11	73	11.893	16	12.176				
	12	73	2.180	15	0.0				
	1	74	2.124	20	3.171				
	2	74	5.975	15	5.947				
1232K1	3	73	5.720	17	12.828				
	4	73	14.555	13	16.452				
	5	73	12.148	17	11.015				
	6	73	1.869	15	5.862				
	7	73	0.0	13	0.0				
	8	73	0.0	21	0.0				
	9	73	0.0	12	0.0				
	10	73	2.832	13	0.0				
	11	73	12.403	16	16.509				
	12	73	8.637	15	0.0				
	1	74	1.557	20	0.0				
	2	74	7.900	15	9.996				

TRIBUTARY FLOW INFORMATION FOR FLORIDA 05/28/76

LAKE CODE 1232 LAKE OKEECHOBEE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
1232L1	3	73	0.028	17	0.0				
	4	73	-0.708	13	0.0				
	5	73	-0.170	17	0.0				
	6	73	0.283	15	0.0				
	7	73	1.444	13	0.0				
	8	73	9.684	21	7.362				
	9	73	1.586	12	0.0				
	10	73	-0.396	13	0.0				
	11	73	0.0	16	0.0				
	12	73	-0.538	15	-3.256				
	1	74	0.0	20	0.0				
	2	74	0.0	15	0.0				
1232M1	3	73	1.076	17	0.736				
	4	73	0.481	13	0.396				
	5	73	0.510	17	0.623				
	6	73	5.125	15	1.274				
	7	73	0.0	13	0.0				
	8	73	27.043	21	43.325				
	9	73	16.877	12	19.510				
	10	73	11.185	13	10.449				
	11	73	4.106	16	0.0				
	12	73	0.850	15	0.0				
	1	74	0.765	20	0.0				
	2	74	0.510	15	0.0				
1232ZZ	3	73	28.487	17	24.013				
	4	73	14.696	13	19.086	12	0.0		
	5	73	11.950	17	11.213				
	6	73	21.549	15	1.246				
	7	73	110.124	13	86.055				
	8	73	81.807	21	76.909				
	9	73	79.882	12	79.202				
	10	73	35.453	13	28.940				
	11	73	12.205	16	12.771				
	12	73	7.221	15	0.085				
	1	74	3.710	20	0.934				
	2	74	0.510	15	0.142				

APPENDIX D

PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 75/08/25

123201
26 50 10.0 080 49 20.0
LAKE OKEECHOBEE
12099 FLORIDA

11EPALES
4

2111202
0012 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/07	13 00	0000	24.4	10.3	24	700	8.60	143	0.040	2.100	0.180	0.015
	13 00	0004	24.3	9.6		660	8.70	141	0.040	1.600	0.190	0.007
	13 00	0006	23.8	9.7		650	8.80	144	0.050	1.600	0.190	0.009
73/09/01	14 30	0000	28.5	7.2	16	710	8.50	136	0.060	2.300	0.100	0.013
73/11/06	10 15	0000	24.8		14	643	8.40	124	0.050	1.800	0.170	0.008
	10 15	0005	24.7	8.0		643	8.20	122	0.050	1.600	0.180	0.012
	10 15	0010	24.6	7.4		644	8.10	124	0.050	1.400	0.180	0.023

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/07	13 00	0000	0.073	
	13 00	0004	0.060	
	13 00	0006	0.055	
73/09/01	14 30	0000	0.069	16.2
73/11/06	10 15	0000	0.058	10.7
	10 15	0005	0.070	
	10 15	0010	0.075	

STORET RETRIEVAL DATE 75/08/25

123202
26 57 10.0 081 02 10.0
LAKE OKEECHOBEE
12043 FLORIDA

11EPALES
4

2111202
0005 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/08	11 50	0000			35	620	8.50	123	0.060	1.800	0.060	0.008
	11 50	0003	26.2	8.0		620	8.50	122	0.040	1.700	0.060	0.006
73/09/01	11 05	0000	28.2	6.0	19	380	8.00	49	0.090	2.700	0.100	0.032
73/11/06	09 20	0000	24.5		18	301	7.90	56	0.070	2.000	0.030	0.014
	09 20	0004	24.5	6.8		304	7.70	53	0.040	1.600	0.020	0.014

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/08	11 50	0000	0.051	11.2
	11 50	0003	0.048	
73/09/01	11 05	0000	0.201	41.3
73/11/06	09 20	0000	0.076	25.2
	09 20	0004	0.074	

STORET RETRIEVAL DATE 75/08/25

123203
26 47 40.0 080 55 00.0
LAKE OKEECHOBEE
12099 FLORIDA

11EPALES
4

2111202
0006 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/08	12 30	0000			72	680	8.70	143	0.040	1.500	0.040	0.006
	12 30	0003	25.8	8.4		700	8.80	141	0.030	1.400	0.030	0.004
73/09/01	11 25	0000	27.8	6.4	36	1147	8.40	298	0.140	3.600	0.210	0.007
73/11/06	09 40	0000	25.3	7.4	29	552	8.70	109	0.050	2.000	0.040	0.011

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/08	12 30	0000	0.025	3.1
	12 30	0003	0.022	
73/09/01	11 25	0000	0.021	8.1
73/11/06	09 40	0000	0.036	19.8

STORET RETRIEVAL DATE 75/08/25

123204
26 43 00.0 080 47 20.0
LAKE OKEECHOBEE
12099 FLORIDA

11EPALES
4

2111202
0005 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/08	13 00	0000	25.9	9.8	36	800	8.80	154	0.050	1.700	0.040	0.008
73/09/01	11 45	0000	27.5		36	1100	8.40	296	0.060	3.700	0.940	0.009
73/11/06	09 50	0000	25.3	7.4	33	740	8.60	150	0.050	1.800	0.040	0.009

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/08	13 00	0000	0.030	5.3
73/09/01	11 45	0000	0.046	8.1
73/11/06	09 50	0000	0.030	14.2

STORET RETRIEVAL DATE 75/08/25

123205
26 49 30.0 080 43 40.0
LAKE OKEECHOBEE
12099 FLORIDA

11EPALES 2111202
4 0010 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/09	11 00	0000			18	670	8.50	144	0.070	1.600	0.160	0.009
	11 00	0004	22.6	8.5		650	8.80	144	0.060	1.200	0.160	0.009
	11 00	0008	22.4	8.3		610	8.80	142	0.070	1.200	0.160	0.009
73/09/01	15 10	0000	28.3	7.6	22	704	8.70	136	0.060	1.900	0.060	0.008
73/11/06	12 20	0000	24.9		12	690	8.40	133	0.060	1.900	0.240	0.019
	12 20	0005	24.8	9.6		689	8.40	133	0.060	1.500	0.250	0.023
	12 20	0010	24.7	7.6		690	8.20	132	0.050	1.500	0.230	0.028

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/09	11 00	0000	0.042	8.5
	11 00	0004	0.040	
	11 00	0008	0.040	
73/09/01	15 10	0000	0.041	30.5
73/11/06	12 20	0000	0.096	10.4
	12 20	0005	0.094	
	12 20	0010	0.095	

STORET RETRIEVAL DATE 75/08/25

123206
26 59 40.0 080 40 30.0
LAKE OKEECHOBEE
12099 FLORIDA

11EPALES
4

2111202
0005 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/09	16	45 0000	27.0	9.7	20	640	8.80	141	0.070	1.800	0.160	0.007
	16	45 0003	24.8	8.9		630	8.80	141	0.060	1.200	0.160	0.005
73/09/04	11	40 0000	28.9	6.4	38	567	8.30	113	0.100	1.600	0.210	0.058
73/11/06	12	40 0000	26.2		18	692	8.60	130	0.050	1.600	0.100	0.019
	12	40 0006	25.8	8.2		690	8.30	128	0.050	1.500	0.120	0.022

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/09	16	45 0000	0.059	16.8
	16	45 0003	0.053	
73/09/04	11	40 0000	0.060	6.9
73/11/06	12	40 0000	0.082	20.2
	12	40 0006	0.088	

STORET RETRIEVAL DATE 75/08/25

123207
27 00 40.0 080 55 10.0
LAKE OKEECHOBEE
12043 FLORIDA

11EPALES
4

2111202
0010 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/10	12 00	0000	27.1		18	570	8.50	137	0.080	1.800	0.120	0.011
	12 00	0006	27.2	7.7		560	8.70	135	0.060	1.400	0.080	0.007
73/09/01	15 05	0000	28.9	7.4	24	722	8.80	131	0.090	2.200	0.100	0.008
73/11/06	13 35	0000	26.4		38	455	8.80	94	0.040	1.300	0.020	0.014
	13 35	0005	26.2	8.0		455	8.70	94	0.060	1.500	0.040	0.023

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/10	12 00	0000	0.058	12.0
	12 00	0006	0.066	
73/09/01	15 05	0000	0.058	26.3
73/11/06	13 35	0000	0.053	15.8
	13 35	0005	0.067	

STORET RETRIEVAL DATE 75/08/25

123208
27 00 50.0 080 41 50.0
LAKE OKEECHOBEE
12085 FLORIDA

11EPALES
4

2111202
0007 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/10	12	35 0000	25.0		20	640	8.70	145	0.060	1.500	0.140	0.009
	12	35 0004	25.0	8.8		625	8.70	145	0.060	1.400	0.140	0.005
73/09/04	11	25 0000	28.5	6.8	19	427	8.30	77	0.120	1.800	0.300	0.038
73/11/06	12	55 0000	25.6	7.8	36	653	8.70	127	0.040	1.400	0.030	0.013

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/10	12	35 0000	0.078	13.6
	12	35 0004	0.073	
73/09/04	11	25 0000	0.093	10.2
73/11/06	12	55 0000	0.058	14.5

STORET RETRIEVAL DATE 75/08/25

123209
27 08 40.0 080 50 00.0
LAKE OKEECHOBEE
12093 FLORIDA

11EPALES
4

2111202
0007 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/10	15 40	0000	26.6		35	380	8.70	101	0.070	1.400	0.060	0.008
	15 40	0005	26.3	8.1		440	8.70	96	0.090	1.100	0.060	0.004
73/09/04	10 50	0000	29.0	5.2	33	230	7.90	25	0.260	2.100	0.140	0.054
73/11/06	13 20	0000	25.3		38	544	8.80	109	0.040	1.100	0.030	0.027
	13 20	0005	25.2	8.0		543	8.70	110	0.030	1.200	0.030	0.025

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/10	15 40	0000	0.050	8.7
	15 40	0005	0.045	
73/09/04	10 50	0000	0.087	6.1
73/11/06	13 20	0000	0.069	13.0
	13 20	0005	0.072	

STORET RETRIEVAL DATE 75/08/25

123210
27 08 50.0 080 43 50.0
LAKE OKEECHOBEE
12093 FLORIDA

11EPALES
4

2111202
0010 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/10	16 00	0000	27.3		17	640	8.70	143	0.070	1.400	0.110	0.007
	16 00	0006	27.1	8.2		625	8.70	142	0.070	1.400	0.110	0.006
73/09/04	11 10	0000	28.4	7.8	20	520	8.80	94	0.100	1.700	0.110	0.021
73/11/06	13 05	0000	24.7		35	618	8.60	120	0.040	1.300	0.030	0.027
	13 05	0006	24.6	8.0		618	8.50	125	0.040	1.100	0.030	0.041

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/10	16 00	0000	0.069	13.2
	16 00	0006	0.066	
73/09/04	11 10	0000	0.068	20.7
73/11/06	13 05	0000	0.061	10.6
	13 05	0006	0.064	

APPENDIX E

TRIBUTARY and WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 75/08/25

12321
26 59 00.0 080 37 00.0
OKEECHOBEE WATERWAY
12117 MARTIN CO MST MA
T/LAKE OKEECHOBEE
ST MST 15 BRDG NEAR PORT MAYACA
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	13 15		0.100	1.400	0.040	0.025	0.105
73/04/13	12 05		0.056	1.490	0.064	0.013	0.090
73/05/17	13 15		0.540	1.310	0.037	1.000	1.100
73/06/15	13 30		0.040	1.300	0.115	0.038	0.065
73/07/13	13 30		0.070	2.000	0.039	0.058	0.180
73/08/21	14 15		0.315	1.370	0.147	0.210	0.260
73/09/12	13 55		0.370	1.600	0.056	0.170	0.200
73/10/13	15 30		0.290	1.750	0.140	0.210	0.250
73/11/16	13 50		1.000	1.150	0.032	0.032	0.055
73/12/15	15 30		0.232	1.300	0.034	0.036	0.110
74/01/20	16 51		0.270	1.300	0.024	0.025	0.095
74/02/15	13 20		0.270	1.400	0.140	0.025	0.070

STORET RETRIEVAL DATE 75/08/25

123251
27 05 30.0 080 39 30.0
UNNAMED CREEK
12 MARTIN CO HWY MA
T/LAKE OKEECHOBEE
ST HWY 15 BRDG NEAR CHANCY BAY
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	11 47		0.630	2.300	0.860	1.400	1.500
73/04/13	11 45		1.240	1.540	0.088	1.200	1.300
73/05/17	12 10		0.077	1.760	0.013	0.015	0.110
73/06/15	12 46		0.450	1.320	0.062	0.850	0.890
73/07/13	13 20		0.084	1.900	0.280	0.640	
73/08/21	14 00		0.180	2.800	0.320	0.720	0.820
73/09/12	13 05		0.147	2.100	0.410	0.620	0.690
73/10/13	15 15		0.310	3.900	0.580	0.975	1.050
73/11/16	12 45		0.690	2.400	0.052	0.760	0.850
73/12/15	13 50		0.910	2.600	0.124	0.880	0.890
74/01/20	15 33		0.740	1.700	0.100	0.690	0.760
74/02/15	13 00		0.756	1.800	0.125	0.675	0.810

STORET RETRIEVAL DATE 75/08/25

12J2C1
27 12 30.0 080 47 30.0
TAYLOR CREEK
12 OKEECHOBEE CO FW
T/LAKE OKEECHOBEE
ST HWY 15 BRDG SE OF OKEECHOBEE
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	11 32		0.078	1.760	0.160	0.510	0.590
73/04/12	11 35		0.021	1.300	0.038	0.046	0.095
73/05/17	11 55		0.028	1.600	0.150	0.168	0.210
73/06/15	12 40		0.210	1.400	0.018	0.220	0.370
73/07/13	13 15		0.240	2.800	0.400	0.500	0.590
73/08/21	13 50		0.065	1.400	0.160	0.350	0.440
73/09/12	13 00		0.250	2.200	0.290	0.720	0.800
73/11/16	12 30		0.108	2.100	0.104	0.264	0.315
74/02/15	12 30		0.032	4.200	0.155	0.490	0.610

STORET RETRIEVAL DATE 75/08/25

123201
27 11 30.0 080 50 30.0
LEMMIN CREEK
12 OKEECHOBEE CO HW
T/LAKE OKEECHOBEE
ST HWY 78 BRDG NEAR EAGLE BAY
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	11 20		0.030	2.200	0.110	0.048	0.135
73/04/13	11 20		0.020	1.900	0.086	0.022	0.075
73/05/17	12 00		0.024	1.320	0.080	0.023	0.050
73/06/15	12 35		0.010<	2.800	0.075	0.189	0.315
73/09/12	12 20		0.022	2.000	0.054	0.370	0.440
73/10/13	14 45		0.048	4.300	1.000	0.160	0.200
73/11/16	12 30		0.040	0.950	0.020	0.080	0.100
73/12/15	13 10		0.048	2.000	0.128	0.096	0.100
74/01/20	14 39		0.028	1.400	0.036	0.192	0.240
74/02/15	12 15		0.016	2.700	0.080	0.055	0.110

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/05/29

12326I
27 09 00.0 080 52 00.0
KISSIMME RIVER
12 OKEECHOBEE CO HW
T/LAKE OKEECHOBEE
ST HWY 78 BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	11 00		0.037	1.600	0.092	0.032	0.045
73/04/13			0.010<	1.380	0.044	0.014	0.060
73/05/17	12 00		0.030	1.300	0.200	0.019	0.045
73/06/15	12 30		0.200	1.100	0.087	0.105	0.135
73/07/13	13 00		0.035	4.200	2.400	0.120	0.195
73/08/21	13 30		0.031	1.100	0.176	0.054	0.090
73/09/12	12 15		0.028	1.800	0.160	0.050	0.080
73/10/13	14 30		0.078	2.000	0.350	0.054	0.065
73/11/16	12 20		0.330	1.150	0.024	0.060	0.095
73/12/15	13 00		0.384	1.200	0.040	0.056	0.065
74/01/20	14 30		0.040	1.300	0.016	0.016	0.055
74/02/15	12 00		0.400	0.500	0.165	0.045	0.075

< VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/08/25

1232F1
27 03 30.0 080 58 30.0
INDIAN PRAIRIE CANAL
12 GLADES CO HWY MA
T/LAKE OKEECHOBEE
ST HWY 78 BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	10 43		0.189	1.300	0.132	0.063	0.095
73/04/13	11 47		0.160	1.150	0.078	0.085	0.105
73/05/17	11 30		0.044	1.260	0.094	0.063	0.085
73/06/15	11 02		0.066	1.150	0.120	0.115	0.145
73/07/13	12 45		0.035	1.400	0.147	0.189	0.290
73/08/21	13 15		0.038	1.890	0.240	0.176	0.270
73/09/12			0.150	3.570	0.420	0.198	0.260
73/10/13	14 15		0.168	4.600	0.870	0.094	0.155
73/11/16	12 15		0.384	2.200	0.044	0.068	0.120
73/12/15	12 20		0.384	2.200	0.096	0.075	0.090
74/01/20	13 52		0.104	0.900	0.624	0.036	0.105
74/02/15	11 30		0.132	2.400	0.080	0.035	0.075

STORET RETRIEVAL DATE 75/08/25

123201
27 00 00.0 081 04 00.0
MARNEY POND CANAL
12 GLADES CO HWY MA
T/LAKE OKEECHOBEE
AT ST HWY 78 BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	10 25		0.170	0.480	0.071	0.068	0.090
73/04/13	10 30		0.147	1.200	0.100	0.169	0.190
73/05/17	11 00		0.044	1.100	0.078	0.070	0.090
73/06/15	10 53		0.022	1.700	0.110	0.040	0.085
73/08/21	13 00		0.132	1.500	0.160	0.200	0.260
73/09/12	11 35		0.380	2.400	0.189	0.132	0.175
73/10/13	14 00		0.220	3.150	0.770	0.230	0.270
73/11/16	12 00		0.160	1.050	0.054	0.080	0.105
74/01/20	13 41		0.136	0.800	0.020	0.040	0.060
74/02/15	11 17		0.160	2.700	0.090	0.035	0.070

STORET RETRIEVAL DATE 75/08/25

1232H1
26 49 30.0 081 05 30.0
CALOOSAHATCHEE CANAL
12 GLADES CO HWY HA
T/LAKE OKEECHOBEE
ST HWY 25 BRDG IN MOORE HAVEN
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	10 00		0.110	2.700	0.088	0.048	0.075
73/04/13	10 00		0.052	1.760	0.105	0.010	0.030
73/05/17	10 30		0.050	1.700	0.105	0.012	0.045
73/06/15	10 30		0.010K	1.540	0.037	0.013	0.035
73/07/13	12 00		0.024		0.105	0.028	0.090
73/08/21	12 00		0.140	1.470	0.180	0.130	0.150
73/09/12	11 10		0.378	3.300	0.115	0.087	0.115
73/10/13	13 30		0.154	2.600	0.420	0.147	0.175
73/11/16	10 45		0.064	1.300	0.044	0.040	0.055
74/01/20	13 20		0.136	1.000	0.032	0.028	0.045
74/02/15	11 00		0.104	5.000	0.170	0.005	0.030

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/08/25

123231
26 41 30.0 080 09 00.0
MIAMI CANAL
12 PALM BEACH CO FW
T/LAKE OKEECHOBEE
ST FWY 80 BRDG IN LAKE MANMOH
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	09 15		0.030	1.570	0.064	0.008	0.040
73/04/13	09 10		0.010	1.760	0.073	0.006	0.029
73/05/17	10 00		0.039	5.600	0.252	0.005	0.030
73/06/15	10 00		0.067	1.680	0.078	0.013	0.040
73/07/13	11 30		1.140		0.690	0.087	0.130
73/08/21	11 30		0.700	2.800	0.460	0.050	0.080
73/09/12	10 30		0.730	3.600	0.195	0.071	0.120
73/10/13	13 00		0.056	3.150	0.190	0.028	0.050
73/12/15	10 50		0.100	1.360	0.144	0.008	0.030
74/01/20	12 46		0.030	1.500	0.356	0.012	0.032
74/02/15	10 35		0.020	2.400	0.045	0.005	0.030

STORET RETRIEVAL DATE 75/08/25

1232R1
26 52 00.0 080 38 00.0
M PALM BEACH CANAL
12 PALM BEACH CO MW
T/LAKE OKEECHOBEE
ST HWY 15 RRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	13 40		0.220	2.200	0.120	0.031	0.270
73/04/13	12 25		0.330	2.300	0.042	0.044	0.150
73/05/17	13 41		0.092	2.400	0.019	0.029	0.170
73/06/15	14 00		0.012	1.400	0.042	0.013	0.060
73/07/13	14 30		0.080	2.050	0.430	0.032	0.070
73/08/21	14 45		0.231	3.200	0.069	0.077	0.280
73/09/12	14 15		0.300	2.300	0.310	0.075	0.160
73/10/13	16 00		0.370	6.700	0.310	0.063	0.105
73/11/16	14 10		0.250	1.050	0.040	0.032	0.065
73/12/15	15 50		0.330	3.000	0.136	0.036	0.100
74/01/20	16 48		0.300	1.100	0.072	0.032	0.065
74/02/15	13 38		0.270	1.500	0.020	0.020	0.075

STORET RETRIEVAL DATE 75/06/25

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12321
26 55 00.0 080 37 00.0
UNNAMED CANAL
12 PALM BEACH CO HO
FLARE GREENSMEE
ST HWY 15 BRDG 4 MI N OF W PALM BEACH CA
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/17	13	30	0.430	1.480	0.200	0.039	0.075
73/04/13	12	15	0.240	2.400	0.048	0.032	0.160
73/05/17	13	40	0.060	1.750	0.022	0.021	0.120
73/06/15	13	52	1.740	2.400	0.380	0.168	0.230
73/07/13	14	00	0.110	3.300	0.500	0.054	0.095
73/08/21	14	30	0.336	2.600	0.500	0.089	0.115
73/09/12	14	35	0.147	3.500	0.390	0.046	0.075
73/10/13	15	45	0.870	3.450	0.800	0.150	0.185
73/11/16	14	00	0.260	1.100	0.044	0.032	0.060
73/12/15	15	40	0.309	2.100	0.064	0.036	0.109
74/01/20	17	10	0.276	1.200	0.020	0.020	0.065
74/02/15	13	30	0.276	2.350	0.055	0.025	0.095

STORET RETRIEVAL DATE 75/08/25

1232M1
27 17 00.0 080 49 30.0
TAYLOR CREEK
12 OKEECHOBEE CO MP
T/LAKE OKEECHOBEE
CEMETARY RD BRDG N OF TOWN OF OKEECHOBEE
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/12/15	13 30		0.368	4.600	0.240	0.540	0.630
74/01/20	15 08		0.024	1.300	0.016	0.670	0.900

STORET RETRIEVAL DATE 75/08/25

12J2CA AS12J2CA P001100
27 13 12.0 080 49 20.0
OKEECHOBEE
12117 OKEECHOBEE CO FLA
T/LK OKEECHOBEE
TAYLOR CREEK
11FEALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/05/01	00	00							
CP(T)-			0.345	21.950	12.450	14.000	15.400	0.157	0.149
73/05/01	04	00							
73/06/04	08	00							
CP(T)-			0.220	14.700	6.700	9.950	11.000	0.148	0.165
73/06/04	16	00							
73/07/02	07	00							
CP(T)-			0.200	12.600	3.990	3.400	4.500	0.162	0.158
73/07/02	16	00							
73/07/31	07	00							
CP(T)-			0.210	13.600	4.200	3.780	7.500	0.152	0.160
73/07/31	17	00							
74/03/29			0.080	16.000	6.500	9.700	11.500	0.090	0.066